

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-24 canceled.

25. (Currently amended) A method for protecting a hydroxyl moiety of a nucleic acid at at least one of a 2'-O, 3'-O, or 5'-O position comprising reacting said nucleic acid with levulinic acid in the presence of a coupling agent that is attached to a polymeric support for a time and under conditions effective to form an ester at said 2'-O, 3'-O or 5'-O position.

26. (Original) The method of claim 25 wherein said nucleic acid is a nucleoside.

27. (Original) The method of claim 25 wherein said coupling agent is a carbodiimide.

28. (Original) The method of claim 25 wherein said carbodiimide is cyclohexylcarbodiimide.

29. (Original) The method of claim 25 wherein said polymeric support is a polystyrene.

30. (Original) The method of claim 25 wherein said polymeric support is a polyethylene glycol.

31. (Original) A method for acylating at least one hydroxyl moiety of a carbohydrate comprising reacting said carbohydrate with levulinic acid in the presence of a coupling agent that is attached to a polymeric support for a time and under conditions effective to form an ester.

32. (Original) The method of claim 31 wherein said coupling agent is a carbodiimide.

33. (Original) The method of claim 32 wherein said carbodiimide is cyclohexylcarbodiimide.

34. (Original) The method of claim 31 wherein said polymeric support is a polystyrene support.

35. (Original) The method of claim 31 wherein said polymeric support is a polyethylene glycol support.

36. (Original) A method for acylating at least one hydroxyl moiety of a steroid molecule comprising reacting said steroid molecule with levulinic acid in the presence of a coupling

agent that is attached to a polymeric support for a time and under conditions effective to form an ester.

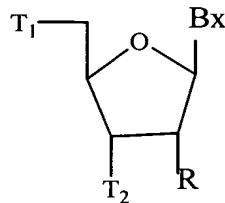
37. (Original) The method of claim 36 wherein said coupling agent is a carbodiimide.

38. (Original) The method of claim 37 wherein said carbodiimide is cyclohexylcarbodiimide.

39. (Original) The method of claim 36 wherein said polymeric support is a polystyrene support.

40. (Original) The method of claim 36 wherein said polymeric support is a polyethylene glycol support.

41. (Original) A method for protecting a hydroxyl moiety on a compound having the following formula:



wherein:

Bx is a nucleobase;

T₁ and T₂, independently, are OH, a hydroxyl protecting group, an activated phosphate group, a nucleotide, a nucleoside, or an oligonucleotide;

R is -H, -hydroxyl, a protected hydroxyl or a 2' substituent group;

provided that at least one of T₁, T₂ or R is -OH;

comprising reacting said compound with levulinic acid in the presence of a coupling agent that is attached to a solid support for a time and under conditions effective to form an ester between said hydroxyl moiety and the levulinyl group.

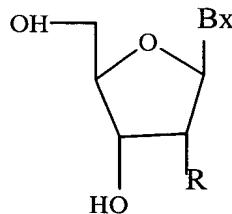
42. (Original) The method of claim 41 wherein said coupling agent is a carbodiimide.

43. (Original) The method of claim 42 wherein said carbodiimide is a cyclohexylcarbodiimide.

44. (Original) The method of claim 41 wherein said polymeric support is a polystyrene support.

45. (Original) The method of claim 41 wherein said polymeric support is a polyethyleneglycol support.

46. (Original) A method for protecting the 3'-O and 5'-O positions of a compound having the following formula:

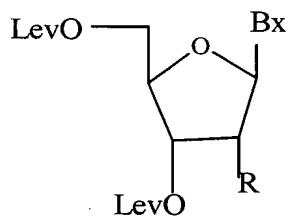


wherein:

B_x is a nucleobase; and

R is -H, or a 2' - substituent;

comprising reacting said compound with levulinic acid in the presence of a coupling agent that is attached to a solid support for a time and under conditions effective to form a compound having formula:

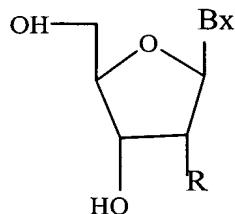


wherein Lev is a -levulinyl.

47. (Original) The method of claim 46 wherein said coupling agent attached to a polymeric support is cyclohexylcarbodiimide attached to a polymeric support.

48. (Original) The method of claim 47 wherein said polymeric support is a polystyrene polymeric support.

49. (Original) A method for protecting the 3'-O and 5'-O positions of a compound having the following formula:

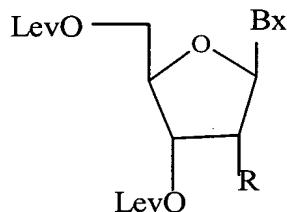


wherein:

B_x is a nucleobase; and

R is $-H$, or a 2'- substituent;

comprising reacting said compound with levulinic acid in the presence of cyclohexylcarbodiimide that is attached to a polystyrene polymeric support for a time and under conditions effective to form a compound having the following formula:



wherein Lev is -levulinyl.

50. (Original) A method for acylating a hydroxyl moiety comprising reacting said hydroxyl moiety with levulinic acid in the presence of a coupling agent that is attached to a polymeric support for a time and under conditions effective to yield an ester.

51. (Original) The method of claim 50 wherein said coupling agent is a carbodiimide

52. (Original) The method of claim 51 wherein said carbodiimide is cyclohexylcarbodiimide.

53. (Original) The method of claim 50 wherein said polymeric support is a polystyrene.

54. (Original) The method of claim 50 wherein said polymeric support is polyethylene glycol.

55. (Original) A method for generating a cyclohexylcarbodiimide derivatized polymeric support from a cyclohexylurea derivatized polymeric support comprising reacting said cyclohexylurea derivatized polymeric support with a dehydrating agent in an organic solvent for a time and under conditions effective to yield said cyclohexylcarbodiimide derivatized polymeric support.

56. (Original) The method of claim 55 wherein said dehydrating agent is POCl_3 .

57. (Original) The method of claim 55 wherein said dehydrating agent is tosylchloride.

58. (Original) The method of claim 55 wherein said organic solvent is CH_2Cl_2 , CHCl_3 , hexane, or pyridine.

59. (Original) The method of claim 55 wherein said polymeric support is a polystyrene polymeric support.

60. (Original) A method for generating a cyclohexylcarbodiimide derivatized polymeric support from a cyclohexylurea derivatized polymeric support comprising the steps of:

reacting said cyclohexylurea derivatized polymer support with a dehydrating agent in an organic solvent for a time and under conditions effective to form a salt;

contacting said salt with an aqueous solution to form said cyclohexylcarbodiimide derivatized polymeric support.

61. (Original) The method of claim 60 wherein said dehydrating agent is POCl_3 .

62. (Original) The method of claim 60 wherein said dehydrating agent is tosylchloride.

63. (Original) The method of claim 60 wherein said organic solvent is CH_2Cl_2 , CHCl_3 , hexane, or pyridine.

64. (Original) The method of claim 60 wherein said polymeric support is a polystyrene polymeric support.